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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,166	07/12/2001	Daisuke Shinomiya	FUJZ 18.830	2508
26304	7590	04/06/2005	EXAMINER	
KATTEN MUCHIN ZAVIS ROSENMAN			PATEL, JAY P	
575 MADISON AVENUE			ART UNIT	
NEW YORK, NY 10022-2585			PAPER NUMBER	

2666

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/904,166

Applicant(s)

SHINOMIYA, DAISUKE

Examiner

Jay P. Patel

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ma et al. (US Patent No. 595338).

3. In regards to claim 1, Ma anticipates A band control device comprising: a controller for aggregating a plurality of physical links into a single logical link and a distributor for distributing a traffic to a sub-logical link into which specified ones of the physical links in the logical link are aggregated so as to meet a specified condition of the traffic. Ma discloses a centralized call admissions control monitor that determines what virtual channels and virtual paths are needed based upon the customer service agreement such as traffic type and quality of service requirements (see figure 1A and 1B CAC 145 and column 7 lines 20-26). The call admissions control (CAC), anticipates the controller since the CAC dynamically decides the allocations of paths and channels that are given to specific traffic types; thus, the CAC in essence determines the how to aggregate multiple physical traffic types into a logical link. Ma also discloses the relationships between virtual paths and channels. The virtual path is comprised of at least one virtual channel in a pipeline relationship. The transmission facility contains the virtual paths that in turn contain the virtual channels. The diameter of each "pipe"

(virtual path), represents the bandwidth of that path (see figure 7A and column 12, lines 40-49). The pipeline structure of virtual paths anticipates dividing the logical link into sub-logical links since the transmission facility can house multiple virtual paths. It is important to note that the transmission facility is incorporated into the CAC module in Ma's disclosure since it is the CAC module which ultimately decides to allocate the virtual channels.

4. In regards to claim 2, Ma discloses a centralized control module the dynamically adjust the bandwidth of a virtual path to respond to varying requests of clients, which ensure a the interface is used to the fullest of its capacity (see figure 1A, Centralized control module 160 and column 8, lines 49-53 and column 7 lines 27-37). This disclosure anticipates a traffic monitor for monitoring traffic amount to meet a traffic condition and assigning physical links based on the traffic condition.

5. In regards to claim 6, Ma discloses the ATM interface between two switches. Wherein each virtual path group, is provisioned for each traffic type (see figure 6 and column 11 lines 59-63). From figure 6 is evident that the sub-logical link (virtual path) has less physical links (virtual channels) than the logical link (OC-3 pipe) that can accommodate multiple virtual paths.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-5, 8-10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma as applied to claim 1 above, and further in view of Dugan et al. (6078586).

8. In regards to claim 4, Ma teaches all the limitations of claim 1 as stated above. Ma fails to particularly disclose that the controller in the band control device transmits/receives a message for establishing the sub-logical link to/from an opposite controller. Dugan teaches the above-mentioned limitation in his disclosure.

Dugan discloses the format of a setup+ message in his disclosure. In the setup+ message, the originating ATM switch address is inserted including the originating ATM switch port address, there is also a field present for having the customer source virtual private network address value, a destination address field including the address of the control processor (ICP) and a field having the customer source virtual private network address value (see figures 4 and 4a; column 5 lines 22-33).

It would have been obvious to one skilled in the art at the time the invention was made that the setup+ message is received by another control processor at the opposite ATM switch. Therefore, the motivation to use the setup+ message format from Dugan's disclosure and incorporate it into Ma's invention. The proper motivation comes from Dugan where it is stated, "to alleviate the problem (data network security), virtual private networks have been developed which currently offer circuit-switched voice services to communications customers and provide the benefits of a private network coupled with

the efficiencies, lower costs, and carrier management of shared network" (see column 2 lines 48-53).

9. In regards to claim 5, Ma teaches all the limitations of claim 1 as stated above. Ma fails to particularly disclose the limitation of having the controller relay the message in claim 4 to a subsequent apparatus. Dugan teaches the limitation of claim 4 as stated above. Dugan also teaches the above-mentioned limitation of claim 5.

Dugan explicitly states that the ATM switched network, routes the setup+ message to an ICP (see figure 4a step 220; column 5 lines 35-43). ICPs are used as a higher-level network in the ATM hierarchical routing scheme according to Dugan.

It would have been obvious to one skilled in the art to combine the routing procedure disclose by Dugan into Ma's invention. The motivation relevant to claim 4 is also relevant to claim 5.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ma as applied to claim 4 above, and further in view of Gardner et al. (6704327 B1).

11. In regards to claim 7, Ma teaches all the limitations of claim 4 as stated above; Ma fails to teach the limitation of the controller returning a message for forming a sub-logical link port established base on the received message as a return sub-logical link port. Gardner teaches the above-mentioned limitation.

Gardner discloses a system for connecting a call in an ATM network through an interworking unit. Gardner discloses that a first communication device, transports user data and call signaling information to a first internetworking unit. The internetworking unit then transports the signaling information to the signal processor via a cross-connect

over a virtual path (see figure 6 and column 15 lines 6-14). The virtual path is established for a return message (signaling information) to be transported through the virtual path. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to combine the functions of the internetworking unit with that of the call admission control disclosed by Ma. The proper motivation comes from Gardner where he states "A more efficient way to control and transport calls over broadband systems using ATM is desirable so that the processor is not attached to or physically linked to the interworking component" (see column 1 lines 45-48). Hence, the processor (call admission control) can be attached to more than one switch as is done in Ma's disclosure.

12. In regards to claims 8, 9 and 10, Ma teaches all the limitations of claim 1 as stated above. Ma fails to teach the limitation of controller returning a response message for the received message, returning a message rejecting the request or commencing a traffic that meets the specific condition. Dugan teaches the limitation of claim 4 as stated above. Dugan also teaches the above-mentioned limitations of claims 8, 9 and 10.

Dugan discloses that a determination is made as to whether a source or destination address field is valid for a virtual path network. If any of the fields are invalid, the ICP returns a release message to the ATM switch to release the channel (see column 6, lines 13-27 and Figure 4(a)). If the fields are validated, the ICP commences an operation to translate the field addresses to recognizable addresses by the ATM switches. This encompasses returning a response message as well as

returning an error message. Furthermore, if a validation is made and enhanced features such as bandwidth requirements are required for the traffic, the ICP processes the message to include these features (column 6, lines 28-41 and figure 4a).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the ICP return message function disclosed by Dugan with the invention disclosed by Ma. The motivation used in regards to claim 4 is also applicable to claims 8, 9 and 10.

13. In regards to claim 13, Ma teaches all the limitations of claim 4 as mentioned above. Ma fails to teach the limitation of the controller transmitting a message requesting an establishment release of the sub-logical link corresponding to the traffic. Dugan teaches the above-mentioned limitation of claim 13. Dugan discloses that as switches connect a call, they also communicate state changes to the ICPs. If the call is successfully completed, the destination switch can accept additional connections and the source and destination fields in the setup+ message can be replaced with new addresses and the operation commences again (column 9 lines 41-51 and figure 7). Therefore, in essence, once a call is completed, the virtual path can be released since the state has changed and new traffic can be added on the virtual path or if the message needs to be routed further, the source and destination fields can be replaced.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the ICP return message function disclosed by Dugan with the invention disclosed by Ma. The motivation used in regards to claim 4 is also applicable to claim 13.

14. Claims 14, 21-22 and 24 are under 35 U.S.C. 103(a) as obvious over Ma.

15. In regards to claim 14, it is obvious that controller relays the establishment release request message to a subsequent apparatus since there is a link present between the source and the destination.

16. In regards to claim 21, that the controller can return an error message in the event that a sub-logical link cannot be established because the connections are bidirectional and therefore, traffic can travel in both directions.

17. In regards to claim 22, it is obvious to program the controller to try establishing a link again if the if request ends in a failure; the traffic conditions are dynamic so they change as time progresses and therefore a failure in the present might result in success in the future.

18. In regards to claim 24, it is obvious that a controller will include a collector to collect the information since the connections are bidirectional and therefore, traffic can travel in both directions.

***Allowable Subject Matter***

19. Claims 11-12, 15-20 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay P. Patel whose telephone number is (571) 272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jpp 3/28/2005  
Jay P. Patel  
Examiner  
Art Unit 2666



**KENNETH VANDERPUYE**  
**PRIMARY EXAMINER**